

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
30 October 2003 (30.10.2003)

PCT

(10) International Publication Number
WO 03/090064 A1

(51) International Patent Classification⁷: **G06F 5/06**,
3/06, H04N 5/907

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(21) International Application Number: **PCT/IB03/01579**

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD,
SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US,
UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: **22 April 2003 (22.04.2003)**

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:
02076559.0 **22 April 2002 (22.04.2002)** **EP**

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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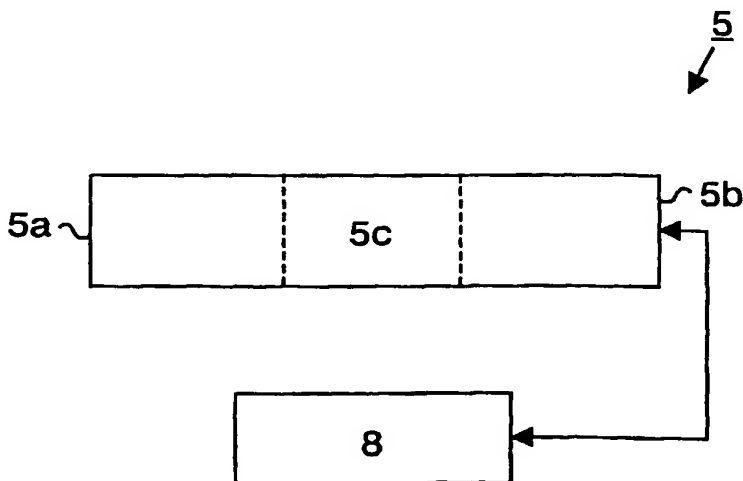
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Published:

— *with international search report*

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: **CIRCUIT, APPARATUS AND METHOD FOR STORING AUDIOVISUAL DATA**



(57) Abstract: Bit-rate scalable compression for storing A/V information in a pause buffer of a digital video recorder, providing a viewer of a live program to take a delayed decision about whether or not to record the program while still viewing the "live" program at full quality, i.e. at a higher quality than the quality at which it will be stored, whereby only the "enhancement layers" need to be stored in the buffer, whereby since the bit rate of these layers is significantly lower than the bit rate for the complete compressed data, the capacity (minutes of recording time) of the buffer is significantly increased.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB 03/01579

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06F5/06 G06F3/06 H04N5/907

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06F H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, IBM-TDB, INSPEC, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 295 094 B1 (CUCCIA DAVID W) 25 September 2001 (2001-09-25) column 2, line 39-57; figure 2	1-6
A	US 6 363 440 B1 (STAPP GEORGE THOMAS ET AL) 26 March 2002 (2002-03-26) column 3, line 18 -column 5, line 65; figure 1	1-6
A	EP 0 936 811 A (FUJITSU LTD) 18 August 1999 (1999-08-18) abstract; figures 1,2	1-6

☐ Further documents are listed in the continuation of box C.

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Date of the actual completion of the international search

23 June 2003

Date of mailing of the international search report

01/07/2003

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Brandenburg, J

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB 03/01579

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6295094	B1	25-09-2001	EP 0935883 A1 18-08-1999
			WO 9913639 A2 18-03-1999
			JP 2001507547 T 05-06-2001
			US 2002051621 A1 02-05-2002
US 6363440	B1	26-03-2002	NONE
EP 0936811	A	18-08-1999	JP 11234599 A 27-08-1999
			DE 69814335 D1 12-06-2003
			EP 1265441 A1 11-12-2002
			EP 0936811 A2 18-08-1999
			US 2001028785 A1 11-10-2001